

**United States Court of Appeals  
for the Federal Circuit**

---

**MEDTRONIC, INC., MEDTRONIC VASCULAR,  
INC.,**  
*Appellants*

v.

**TELEFLEX LIFE SCIENCES LIMITED,**  
*Appellee*

---

2022-1721, 2022-1722

---

Appeals from the United States Patent and Trademark Office, Patent Trial and Appeal Board in Nos. IPR2020-01343, IPR2020-01344.

---

Decided: November 16, 2023

---

MADELEINE C. LAUPHEIMER, Wilmer Cutler Pickering Hale and Dorr LLP, Boston, MA, argued for appellants. Also represented by TASHA JOY BAHAL, MARK CHRISTOPHER FLEMING, HANNAH ELISE GELBORT, JEFFREY SOLLER; BRITTANY BLUEITT AMADI, JENNIFER L. GRABER, Washington, DC.

JOSEPH W. WINKELS, Carlson, Caspers, Vandenburg & Lindquist, P.A., Minneapolis, MN, argued for appellee. Also represented by PETER M. KOHLHEPP, TARA CATHERINE NORGARD, J. DEREK VANDENBURGH.

---

Before LOURIE, PROST, and CHEN, *Circuit Judges*.

LOURIE, *Circuit Judge*.

Medtronic, Inc. and Medtronic Vascular, Inc. (collectively, “Medtronic”) appeal from two final written decisions of the United States Patent and Trademark Office Patent Trial and Appeal Board (“the Board”) holding that it had not shown the challenged claims of U.S. Patent RE46,116 (“the ’116 patent”) to be unpatentable. *Medtronic, Inc. v. Teleflex Life Scis. Ltd.*, IPR2020-01343, 2022 WL 557277 (P.T.A.B. Feb. 23, 2022) (“’1343 Decision”); *Medtronic, Inc. v. Teleflex Life Scis. Ltd.*, IPR2020-01344, 2022 WL 557664 (P.T.A.B. Feb. 23, 2022) (“’1344 Decision”). For the reasons provided below, we affirm.

#### BACKGROUND

The ’116 patent, developed by Vascular Solutions Inc. (“VSI”) but now owned by appellee Teleflex Life Sciences Limited (“Teleflex”), issued from U.S. Patent App. 11/416,629 (“the ’629 application”) filed on May 3, 2006. It is directed to a method for using a guide extension catheter with a guide catheter. *See, e.g.*, ’116 patent, col. 13 l. 62–col. 14 l. 25. A key portion of a representative method claim from that patent reads as follows:

25. A method, comprising:

advancing a distal end of a guide catheter having a lumen through a main blood vessel to an ostium of a coronary artery;

...

*Id.* col. 13 ll. 62–65.

According to Teleflex, VSI conceived the claimed invention in early 2005 and then worked to develop it under the “GuideLiner” name. ’1343 Decision at \*13. In order to

show when it developed the GuideLiner product, Teleflex submitted numerous declarations and documentary exhibits. *Id.* Teleflex asserts that what was known as the “rapid exchange” or “RX” version of the GuideLiner, when used, was an embodiment of the ’116 patent. *Id.* at \*14. The RX GuideLiner eventually entered the market in 2009. *Id.* at \*24. In 2019, Medtronic launched its own allegedly infringing guide extension catheter product, Telescope. Appellee’s Br. at 2.

Medtronic filed two petitions for *inter partes* review (“IPR”) of the ’116 patent. In the ’1343 IPR, Medtronic asserted that claims 52 and 53 were anticipated by Ressemann;<sup>1</sup> claims 25–40, 42, 44–48, 52, and 53 would have been obvious in light of Ressemann and Itou;<sup>2</sup> and claim 45 would have been obvious in light of Ressemann, Itou, and Kataishi.<sup>3</sup> Medtronic asserted that Itou was prior art under pre-AIA § 102(e). However, Teleflex argued that Itou was not prior art because the claimed invention was (1) conceived prior to Itou’s filing date of September 23, 2005 (*i.e.*, the critical date), and (2) was either (a) actually reduced to practice before the critical date or (b) diligently pursued until its constructive reduction to practice through its effective filing in May 2006. Medtronic did not contest Teleflex’s demonstration of conception, *’1343 Decision* at \*14, but challenged Teleflex’s alleged showings of both actual reduction to practice and diligence until constructive reduction to practice.

The Board first found that Ressemann anticipated claims 52 and 53, which Teleflex did not dispute and does not appeal. *’1343 Decision* at \*11. It then found that Itou did not qualify as prior art to the ’116 patent under pre-AIA

---

<sup>1</sup> U.S. Patent 7,604,612 (“Ressemann”).

<sup>2</sup> U.S. Patent 7,736,355 (“Itou”).

<sup>3</sup> U.S. Patent Application Publication 2005/0015073 (“Kataishi”).

first-to-invent provisions, and that Medtronic had therefore not shown the other challenged claims to be unpatentable. Specifically, the Board found that (1) the claimed invention was conceived before the critical date of Itou, *id.* at \*14; (2) the claimed invention was actually reduced to practice before the critical date of Itou, *id.* at \*19–25; and (3) the patent owner diligently pursued work on the invention until its constructive reduction to practice through its effective filing in May 2006, *id.* at \*25. The Board, in part, adopted its analysis from another IPR decision on a related patent, *Medtronic, Inc. v. Teleflex Innovations S.Á.R.L.*, IPR2020-00132, Paper 127 at 58–67 (P.T.A.B. Jun. 7, 2021), where it addressed whether or not Itou qualified as prior art to similar, but apparatus, claims with the same priority date. See *'1343 Decision* at \*25. We have since affirmed that decision. *Medtronic, Inc. v. Teleflex Innovations S.Á.R.L.*, Appeal No. 21-2356, 68 F.4th 1298 (Fed. Cir. 2023).

Unique to this case, however, was the question whether or not *in vivo* testing was required for actual reduction to practice because the claims at issue are method claims reciting “advancing . . . a guide catheter . . . through a main blood vessel to an ostium of a coronary artery.” ’116 patent, col. 13 ll. 62–65. The Board found that such testing was not required. *'1343 Decision* at \*20. It noted that Medtronic “was unable to identify any legal precedent requiring *in vivo* performance of a claimed *in vivo* method to show actual reduction to practice.” *Id.* It found that, for the challenged claims, “the viability of the claimed method can be verified using a physical model that replicates the anatomy in which the method would likewise be performed *in vivo*.” *Id.*

In the ’1344 IPR, Medtronic asserted that the challenged claims would have been obvious over various combinations of references, including Ressemann, or in light of

Root.<sup>4</sup> The Board first found that the challenged claims would not have been obvious over the asserted combinations of references. In particular, it found a lack of motivation to combine the references, '1344 *Decision* at \*14–15, 22–24, as well as a nexus to secondary considerations that weighed in favor of nonobviousness, *id.* at 15–22. The Board then found that the '116 patent was entitled to the '629 application's priority date, and thus that Root did not qualify as prior art. *Id.* at \*23–24. It therefore found that Medtronic had not shown the challenged claims to be unpatentable.

Medtronic appealed. Following the completion of briefing in this case, we issued decisions in three cases on related patents with similar claims, the same priority date, and overlapping references: *Medtronic*, 68 F.4th 1298; *Medtronic, Inc. v. Teleflex Innovations S.Á.R.L.*, Appeal No. 21-2357, 70 F.4th 1331 (Fed. Cir. 2023); *Medtronic, Inc. v. Teleflex Innovations S.Á.R.L.*, Appeal No. 21-2359, 69 F.4th 1341 (Fed. Cir. 2021) (collectively, “the previous *Medtronic* decisions”). Thereafter, Teleflex filed a Citation of Supplemental Authority, ECF 43, to which Medtronic responded, ECF 44, explaining how, in their views, those decisions affected this appeal.

We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

#### DISCUSSION

Teleflex asserts that the previous *Medtronic* decisions are dispositive of most arguments advanced by Medtronic here and that the only issue remaining before this court is whether or not the Board erred in concluding that *in vivo* testing was not required for an actual reduction to practice. ECF 43 at 1. Medtronic conceded that it would no longer argue much of what it had briefed, instead pursuing

---

<sup>4</sup> U.S. Patent Application Publication 2007/0260219 (“Root”).

arguments only as to whether or not *in vivo* testing was required and the issue of diligence. ECF 44 at 2. The parties therefore agree that many of the arguments briefed in this case, including all challenges to the '1344 Decision, are foreclosed by our previous *Medtronic* decisions. The only issues potentially remaining relate to Itou's status as prior art: (1) whether or not *in vivo* testing was required for actual reduction to practice and (2) whether or not the patentee exercised reasonably continuous diligence until constructive reduction to practice.

In considering whether or not a reference qualifies as prior art under pre-AIA 35 U.S.C. § 102(e), we must consider whether or not “the invention was described in . . . a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent.” A patent owner may antedate an asserted prior art patent by showing conception of the claimed invention prior to the critical date *and either* actual reduction to practice prior to the reference's critical date *or* “reasonably continuous diligence” in reducing the invention to practice until its effective filing date. *See ATI Techs. v. Iancu*, 920 F.3d 1362, 1369 (Fed. Cir. 2019); *Tyco Healthcare Grp. v. Ethicon Endo-Surgery, Inc.*, 774 F.3d 968, 975 (Fed. Cir. 2014). Actual and constructive reduction to practice are alternative and independent bases. Therefore, we may affirm on *either* actual reduction to practice *or* reasonably continuous diligence until constructive reduction to practice without reaching the other issue. Oral Arg. at 0:30–54, 29:40–29:55 (available at <https://cafc.uscourts.gov/home/oral-argument/listen-to-oral-arguments/>); *see also Medtronic*, 68 F.4th at 1308.

For the reasons provided below, we affirm the Board's finding of constructive reduction to practice and do not reach the issue of actual reduction to practice.

## I

An asserted prior art reference can be antedated based on a constructive reduction to practice by a showing of (1) conception prior to the filing date of the asserted reference and (2) reasonably continuous diligence from just before the date the asserted reference was filed until the date that the patent owner filed its priority application. *Perfect Surgical Techniques, Inc. v. Olympus Am., Inc.*, 841 F.3d 1004, 1007 (Fed. Cir. 2016) (requiring diligence for the “entire critical period, which begins just prior to the competing reference’s effective date and ends on the date of the invention’s reduction to practice”); *see also* ’1343 *Decision* at \*25. Medtronic does not contest that VSI conceived the claimed invention before Itou’s filing date. ’1343 *Decision* at \*27. However, Medtronic argues that it “preserved” the issue of diligence at page 41 of its opening brief. ECF 44 at 1. That page of its opening brief includes the following two sentences on diligence: “In addressing diligence, the Board simply adopted its earlier erroneous diligence analysis in IPR2020-00132. Appx61–62. Therefore, if this Court vacates the Board’s diligence holding in No. 21-2356, it should likewise vacate the Board’s decision here.” Appellant’s Br. at 41.

We did not vacate the Board’s diligence holding in that decision, *see Medtronic*, 68 F.4th at 1308, so Medtronic’s condition precedent has therefore not been met. That statement by Medtronic in its opening brief therefore constitutes a clear waiver of its diligence argument. Recognizing that we did not address the issue of diligence in the previous *Medtronic* decisions, Medtronic nevertheless urges us, in its Response to Teleflex’s Citation of Supplemental Authority, to “decide” “the diligence question briefed at pp. 51-71 of Medtronic’s brief in 21-2356.” ECF 44 at 1. That is no argument; it is an improper incorporation by reference. “[A]rgument by incorporation . . . is a violation of Fed. R. App. P. 28(a)(6).” *Monsanto Co. v. Scruggs*, 459 F.3d 1328, 1335 (Fed. Cir. 2006) (finding

arguments incorporated by reference from district court memoranda waived). Further, “[i]t would be fundamentally unfair to allow a party to use incorporation to exceed word count.” *Microsoft Corp. v. DataTern, Inc.*, 755 F.3d 899, 910 (Fed. Cir. 2014).

Medtronic does not contest that its arguments on diligence amount to incorporation by reference. Oral Arg. at 1:19–1:50 (“I think we are trying to incorporate by reference.”). It argues that, despite that argument being an undisputed incorporation by reference, it should still be considered because the Board incorporated *its* analysis by reference. *See id.* at 1:51–2:33; *’1343 Decision* at \*25. That argument has no merit. The Board is certainly entitled to incorporate by reference analyses from other decisions, but that does not entitle an appellant to violate our rules when it argues before us.

Moreover, we have word limits on briefs before this court. We limit principal briefs to 14,000 words, and if a litigant wishes to exceed that limit, it must move to do so. Fed. Cir. R. 32(b)(1).

In this case, Medtronic moved to extend the word limit by 6,000 words, for a total of 20,000 words for its principal brief. Appeal No. 22-1605, ECF 21.<sup>5</sup> The motions panel denied that motion, confirming that the opening briefs were “not to exceed 14,000 words.” ECF 5. According to its Certificate of Compliance, Medtronic’s opening brief

---

<sup>5</sup> Appeal Nos. 22-1605, 22-1606, 22-1721, and 22-1722 were originally consolidated, with 22-1605 as the lead appeal. Medtronic moved, unopposed, to deconsolidate the cases at the same time it asked for an increased word limit. Appeal No. 22-1605, ECF 21. The motions panel granted that motion to deconsolidate 22-1601 and 22-1602 from 22-1721 and 22-1722 but left them as companion cases and denied the motion to increase the word limit. ECF 5.



includes 13,979 words, yet it attempts to incorporate by reference *twenty* pages from another brief in another case, amounting to over 4,000 extra words. See Appeal No. 21-2356, ECF 20 at 51–71. That is a clear violation of both the motions panel’s order and our rules.

In pursuing this appeal, Medtronic chose to make certain strategic decisions concerning what material to include in its opening brief, and it affirmatively chose not to include developed arguments on diligence. See, e.g., *Montanto*, 459 F.3d at 1341 (“In order for this court to reach the merits of an issue on appeal, it must be adequately developed.”). It cannot now undo those decisions. We therefore consider Medtronic’s challenges to the Board’s finding of diligence waived. *United States v. Olano*, 507 U.S. 725, 733 (1993) (“Whereas forfeiture is the failure to make the timely assertion of a right, waiver is the ‘intentional relinquishment or abandonment of a known right.’” (quoting *Johnson v. Zerbst*, 304 U.S. 458, 464 (1938))).

Because Medtronic waived any challenges to the Board’s diligence finding, and did not contest conception, we affirm the Board’s finding that Itou is not prior art to the challenged claims based on VSI’s constructive reduction to practice. *’1343 Decision* at \*25. Because we agree with the Board that Itou does not qualify as prior art, we likewise affirm the Board’s holdings in its *’1343 Decision* that Medtronic did not demonstrate by a preponderance of the evidence that the challenged claims of the *’116* patent are unpatentable.<sup>6</sup>

## II

Medtronic additionally argues that the Board erred in finding that there was an actual reduction to practice prior to Itou’s filing. As we explained above, a patent owner may

---

<sup>6</sup> We do not address the Board’s holding of claims 52 and 53 as anticipated, as that finding was not appealed.

10 MEDTRONIC, INC. v. TELEFLEX LIFE SCIENCES LIMITED

antedate an asserted reference based on prior conception and *either* actual reduction to practice *or* constructive reduction to practice. Here, the Board found that the patent owner had demonstrated both. '1343 *Decision* at \*25. Appellants acknowledge that we can affirm on either issue. Oral Arg. at. 0:30–54 (“The court could affirm on either actual reduction to practice [or constructive reduction to practice].”); *id.* at 29:40–29:55 (“If you decide that the argument on diligence issue is not before you, then I agree, your honor, that you can affirm the case.”). Because we affirm on constructive reduction to practice, we need not reach the issue of actual reduction to practice, including the question of whether or not *in vivo* testing was required.

### III

Further, because Medtronic dropped its challenges to the Board’s other holdings in light of our previous *Medtronic* decisions, ECF 44, we likewise affirm the Board’s holdings in its '1344 *Decision* that Medtronic did not demonstrate by a preponderance of the evidence that the challenged claims of the '116 patent are unpatentable.

### CONCLUSION

We have considered Medtronic’s remaining arguments but find them unpersuasive. For the foregoing reasons, the decision of the Board is affirmed.

**AFFIRMED**